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ABSTRACT

This paper describes two mini-workshops that professors can use with undergraduate marketing students to help students learn how to locate and creatively use readily available secondary data for market research. The first mini-workshop, "Searching for Buying Power Concentration in Industrial/Organizational Markets," uses information from Department of Commerce and other federal publications, such as the "Standard Industrial Classification Manual," to analyze the employment patterns and buying power of specific industry segments, such as the wood furniture industry. The second mini-workshop, "Creating Sales Territories," uses federal census data and the "County Business Patterns" publication to identify and organize sales territories for a fictional food processing company that sells its products to restaurants. Specific guidelines for conducting the workshops are included, such as a list of required publications. (MDM)

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Teaching the Use of Secondary Data In Undergraduate Marketing Courses: A Unique Approach

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INTRODUCTION

Courses in marketing in university schools or colleges of business, should help students develop some skills that they will be able to apply on the job when they graduate, or on their present job if they are already working for a business organization. One such skill that students can master is the ability to locate and creatively use secondary data. This skill will also prove to be of lifetime value to them.

In the world of the marketing practitioner, accurate information is needed to plan product, price, promotion, and distribution strategies for targeted market segments. The marketing planning activity requires the use of both primary and secondary data. The later is the focus of this document; specifically data from the federal government. Learning to use government data for marketing planning purposes is important for students because government data is widely available to them at no cost through the federal depository system. No matter where they will be living or working, there should be a depository library relatively close by since there are some 1,400 depository libraries in the United States.

Recognizing the importance of government data for marketing planning purposes, the author has developed a program within Auburn University at Montgomery's Marketing Department called "Secondary Data Across the Marketing Curriculum." At this juncture, four different workshops have been developed for four different marketing courses. The workshops focus on the use of secondary data (essentially government data) for marketing planning purposes. Three of the workshops are 2 hours long, the fourth is 4 hours long. They are team-taught in the university's library by the author and the government documents librarian. These workshops appear to be unique; there is no evidence that anything similar to them is being offered at other colleges or universities.

Although most professors will not want to incorporate such full-scale workshops into their courses, they might to adopt the mini-workshop approach outlined in this document. Two different mini-workshops are described. For many professors, the necessary data is readily available since approximately 925 of

the federal depositories are located in academic libraries. Professors can conduct the mini-workshops themselves, or ask their government documents librarian or other library staff member to help.

SEARCHING FOR BUYING POWER CONCENTRATION IN INDUSTRIAL/ORGANIZATIONAL MARKETS: MINI-WORKSHOP #1

Defining market segments is a prelude to target marketing. In industrial/organizational marketing (marketing to commercial enterprises, government units, and institutions), the segmentation process has been defined by some as a two-stage process: macrosegmentation and microsegmentation. The former focuses on rather easily determined characteristics of the buying organization such as Standard Industrial Classification (SIC) category, organization size and structure, and geographical location. Microsegmentation, on the other hand, focuses on decision-making units within each macrosegment.

The author conducts a workshop within the context of an industrial/organizational undergraduate and a graduate marketing management course to illustrate the process of macrosegmentation using government data. The workshop lasts two class periods--250 minutes. The mini-workshop outlined for the reader illustrates the principles of macrosegmentation with regard to two of the three variables: SIC category and organization size and structure. For your classes the author suggests you use photocopies of the actual data tables in the government reports, or if you would rather, you can simply use the data contained herein. If you choose to retrieve the data yourself, you will find the sources used at the end of the description of this workshop. The workshop begins with a discussion of the SIC system since it is the key to finding information on concentration of buying power by organization size and structure.

THE SIC SYSTEM

Information about any industry is available to marketers from a number of government and private sources. Access to much of this information is through the federal government's SIC system described in the Standard Industrial Classification Manual (United States Executive Office of the President, 1987). Every establishment in the United States is assigned a code which reflects the main type of product or activity undertaken at that location. The SIC system covers the entire field of economic activities, as shown in Exhibit 1.

EXHIBIT 1. Structure of the Standard Industrial Classification (SIC) System

Industry Division	Title	Major Groups
A	Agriculture, Forestry and Fishing	01-09
B	Mining	10-14
C	Construction	15-17
D	Manufacturing	20-39
E	Transportation & Public Utilities	40-49
F	Wholesale Trade	50-51
G	Retail Trade	52-59
H	Finance, Insurance & Real Estate	60-67
I	Services	70-89
J	Public Administration	91-97
K	Nonclassifiable Establishments	99

The major groups are further broken down into industry groups and industries represented by three and four-digit numerical codes. The more digits used, the more detailed will be the industry description. For example, plants in the wood household furniture industry are represented by SIC 2511, which is part of the Household Furniture industry group--SIC 251 within the major group, Furniture and Fixtures--SIC 25. The latter is part of industry division "D," denoted as Manufacturing.

ORGANIZATION SIZE AND STRUCTURE ANALYSIS

Organization size relates to buying power; in fact, it is used as a surrogate measure of buying power. For example, the larger an organization's size--as measured by employment, shipments, revenues, or value added--the greater will be the quantity demanded of the goods and services it uses. Buying power is concentrated in the hands of a relatively small number of large organizations. In fact, an approximation of Pareto's Law, or the "20/80" principle, is found in many industries or segments. That is, 20 percent of the organizations in an industry generally account for approximately 80 percent of the total amount of the economic activity and employment in that industry. The significance of this generalization for a marketer is that these same organizations represent approximately 80 percent of the goods and services consumed by that industry. Several examples from the commercial market, based on United States Department of Commerce data, are given in Exhibit 2 to illustrate approximations of the "20/80" principle. Two industry

divisions are included: retailing and manufacturing, together with a representative industry subdivision of the manufacturing division.

EXHIBIT 2. Approximation of the "20/80" Principle in Several Commercial Market Segments

Market Segment	Concentration Based on:	
	Value of Economic Activity	Number of Employees
Retailing	In 1987, retail establishments (stores) in the U. S. with 15 or more employees represented just 21% of all stores, yet they accounted for 70% of all retail sales. (U. S. Dept. of Commerce 1990b, Table 2).	In 1992, retail stores in the U. S. with 10 or more employees represented just 30% of all stores, yet they accounted for 80% of total retail employment. (U. S. Dept. of Commerce 1994, Table 1b).
Manufacturing	In 1987, manufacturing establishments (plants) with 50 or more employees represented just 18% of all plants, yet they accounted for 87% of the total value added by all manufacturers. (U. S. Dept. of Commerce 1991, Table E).	In 1992, manufacturing plants in the U. S. with 50 or more employees represented just 17% of all plants, yet they accounted for 81% of total manufacturing employment. (U. S. Dept. of Commerce 1994, Table 1b).
Wood Household Furniture Manufacturing (SIC 2511)	In 1987, wood household furniture manufacturing establishments (plants in SIC 2511) in the U. S. with 50 or more employees represented just 16% the plants in SIC 2511, yet they accounted for 85% of the industry's shipments. (U. S. Dept. of Commerce 1990a, Table 4).	In 1992, wood household furniture plants (SIC 2511) in the U. S. with 50 or more employees represented just 14% of all plants in SIC 2511, yet they accounted for 82% of total employment in SIC 2511. (U. S. Dept. of Commerce 1994, Table 1b).

The examples in Exhibit 2 show market concentration by two different measures: economic activity and number of employees. These examples suggest that an industrial marketer interested in targeting retail stores, manufacturing plants generally, or wood household furniture manufacturing plants specifically, might target only the larger firms--thereby dramatically reducing the number of organizations to be contacted, yet retaining most of the market potential.

SIC 2511 was included in Exhibit 2 since it is used in a hypothetical scenario whereby a marketer of particleboard is interested in the wood furniture and as a potential target market. The following five 4-

digit SIC industries are included in wood furniture and fixture manufacturing:

SIC 2511--Wood Household Furniture, Except Upholstered
SIC 2512--Wood Household Furniture, Upholstered
SIC 2517--Wood Television, Radio, Phonograph, and Sewing Machine Cabinets
SIC 2521--Wood Office Furniture
SIC 2541--Wood Office and Store Fixtures, Partitions, Shelving, and Lockers.

In 1992 the above five industries employed a total of 262,053 people; one single industry, SIC 2511, employed 120,280 people, or 46 percent of the five-industry total (United States Department of Commerce 1994, Table 1b.). Because of its relative importance, SIC 2511 will be analyzed further.

At this point, it is relevant to discuss organizational structure. There is an important distinction between an establishment, a term used in Exhibit 2, and a company. In retailing an establishment is a single store; in manufacturing an establishment is a single plant. In manufacturing, for example, if a company has only one establishment (plant), it is considered a single-unit company. Manufacturing companies with two or more plants are considered multi-unit companies. With companies, as with establishments, there is concentration of buying power among the larger companies; that is, there is an approximation of the 20/80 principle. The Census of Manufactures reports the percentages of industry shipments represented by the four, eight, twenty and fifty largest companies in each industry. SIC 2511, wood household furniture manufacturing, serves as an example:

> Example: In 1987, there were a total of 2,771 companies producing wood household furniture (SIC 2511) in the United States. The fifty largest of these companies (2% of all the companies) accounted for 58% of the total shipments of industry SIC 2511 (United States Department of Commerce 1992, Table 4).

In this example, the significance of larger organizations is demonstrated once again in terms of the amount of buying power concentrated in the hands of a very small number of companies.

Concern for the distinction between single-unit and multi-unit companies is also associated with buying decisions. When a marketer deals with a multi-unit company, it is imperative to know at which location the decisions are made regarding the marketer's product (good or service). In some multi-unit companies, many decisions are made at the headquarters location; while other multi-unit companies give more autonomy to their various units, and a great deal of decision making occurs at the local level. With regard to some purchases, decision making is shared between the headquarters location and the local

units. Consequently, it is necessary for the marketer to determine where decision influencers are located.

DATA SOURCES USED

United States Department of Commerce (1990a). 1987 census of manufactures: Industry series, household furniture. Washington, DC: U. S. Government Printing Office.

United States Department of Commerce (1990b). 1987 census of retail trade: Subject series, establishment and firm size. Washington, DC: U. S. Government Printing Office.

United States Department of Commerce (1991), 1987 census of manufactures: Subject series, general summary. Washington, DC: U. S. Government Printing Office.

United States Department of Commerce (1992). 1987 census of manufactures: Subject series, concentration ratios in manufacturing. Washington, DC: U. S. Government Printing Office.

United States Department of Commerce (1994). County business patterns 1992, United States. Washington, DC: U. S. Government Printing Office.

United States Executive Office of the President (1987). Standard industrial classification manual, 1987. Washington, DC: U. S. Government Printing Office.

CREATING SALES TERRITORIES: MINI-WORKSHOP #2

Sales territory design, original configuration and subsequent realignment, is critical to the success of most sales organizations. Consequently, the author conducts a workshop within the context of a sales management course to illustrate the process of designing sales territories using a market potential approach and readily available United States Bureau of the Census data. The workshop, built around three different scenarios, lasts one class period--125 minutes. The existence of computer software programs for establishing sales territories does not negate the relevance of the workshop since students gain an understanding of the logic underlying territory design. The mini-workshop outlined for the reader is but one part of one of the three scenarios the author has been using in the full workshop. It can be used in a sales management or principles of marketing class.

Workshop Scenario Given to the Students

You are the sales manager for Acme Corporation, a new food processing company headquartered in Atlanta. Your company has developed a commercial product line of controlled-portion entrees. Research shows your primary target market should be restaurants, as opposed to institutional food service

operations. You want to establish sales coverage for two of the United States Census Divisions: "South Atlantic" and "East South Central," a total of twelve states. Using these 12 states as control units, establish four territories with approximately equal market potential.

Protocol for Territory Design

The students are given a handout which contains the following protocol for establishing territories based on potential.

1. Use the Standard Industrial Classification (SIC) code which describes the end-use market of interest.
2. Select an independent variable associated with the demand for the product; a variable (demand) factor for which there are secondary data measures.
3. Determine the control unit to be used as a building block--census region or division, state, MSA, county, ZIP code, or census tract.
4. Choose a data source which provides information on the selected independent variable x SIC x control unit.
5. Look up the data (absolute potential) for each control unit, and record it on a worksheet.
6. Find the total value of the variable for all the control units as defined.
7. Determine the percentage of the total (relative potential) represented by each control unit, and record the percentages on a worksheet and on a map.
8. Combine contiguous control units (states) until the desired ratio of total potential is achieved. For example, if you want 4 territories, each one should represent approximately 25 percent of the total potential.

Designing the Territories

Students are given material which shows that SIC 5812 is the code for restaurants (step 1). They are directed to use the number of establishments in SIC 5812 as a measure of market potential (step 2). Students are introduced to County Business Patterns as a source of information on the number of restaurants in each state (steps 3 and 4). Using actual copies of County Business Patterns for the twelve

states (or photocopies of the pages with the SIC 5812 data), students record the number of restaurants on a worksheet (step 5). The total for the twelve states is given to them (step 6). They are instructed to calculate each state's percent of the 12-state restaurant total and record these relative state potentials on a state outline map (step 7). You will probably want to make an overhead transparency of the map so that you can write in the relative potential data as the class calls it out. A copy of the completed worksheet is shown on the next page.

Sales Territory Worksheet:
Number of Restaurants and Relative Potential
Based on data from County Business Patterns, 1992

State	Number of Restaurants (SIC 5812)	% of 12-State Total
AL	4,183	5.8
MS	2,368	3.3
GA	8,492	11.9
FL	16,825	23.5
DE	987	1.4
KY	4,161	5.8
MD	5,863	8.2
NC	8,565	12.0
SC	4,434	6.2
TN	5,784	8.1
VA	7,985	11.1
WV	1,980	2.8
12-STATE TOTAL	71,627	100.0%

Since the objective is to create four territories of approximately equal market potential, students should try to group states into clusters (territories) so that each territory represents about 25 percent of the total potential. Florida by itself accounts for nearly 25 percent of the 12-state potential. The students might want to combine Georgia, Alabama, and Mississippi which would represent 21 percent--part of Tennessee would have to be added to bring the total to 25 percent. Have them try to complete the scenario by combining the remaining groups of states as best they can with the goal of roughly equal potential. Use the overhead transparency to outline the territory boundaries they suggest. There will be some problems, but that doesn't matter. The problems provide the professor the opportunity to discuss some of the reality issues outlined below:

1. Management may not always want territories of equal potential. They may want lower potential territories for sales trainees, and higher potential territories as a reward for senior sales personnel.

2. Some of the territories created during the exercise might present and unworkable territory because of relatively large amounts of geography. This is a good time for the professor to discuss workload, the alternate approach to designing territories.

3. It will occur to some students that the task would be easier if one or more states could be split up. In reality, states are often split along county lines with one or more parts of a state being contained in two or more territories. To accomplish this one would need to use counties as control units and retrieve county data on SIC 5812 from County Business Patterns.

Summary of Materials Needed

These are the materials you will need to conduct the workshop:

1. a listing of SIC codes. See the Standard Industrial Classification Manual (1987), Executive Office of the President, Office of Management and budget. Washington: Government Printing Office, 1987.

2. the most recent County Business Patterns for the 12 states. See County Business Patterns, United States Bureau of the Census. Washington: Government Printing Office.

3. copies of a state outline map of the United States, plus an overhead transparency of the map.

4. handout showing the 8-step protocol

5. worksheet listing the 12 states and the 2 columns for data entry.